Computer Assisted Instruction in Language Teaching

By Simona Mirescu

Most teachers, especially in eastern European countries, still rely on chalk and the blackboard. But over the years, more and more technical inventions have shaped the educational aids with which teachers surround themselves. Maybe it is high time for teachers to find a place for the computer to make our teaching more effective, emphasising its ability to interact with the students.

My experience as a teacher proved that wherever they live, teachers voice similar doubts, hopes, and problems. Teachers are deeply concerned about keeping abreast of the "best," "most modern" methods of teaching, modern aids, etc.

I shall try to prove that we can fulfill students' expectations by using computers as teaching aids and that this can be done even in a country like Romania, where computers are still relatively rare in the teaching process. The computer can be a partner for the learner to play educational games with, or it can be used to generate examples, to illustrate certain operations, or to stimulate conversation.

In computer labs, students tend to form groups of two or three around a single computer, even when there are enough computers available for each student to use one individually. One reason may be that students using computers do not feel that they are being watched or judged; perhaps as a result, they do not feel that the work they do on the computer is their own private property. They become relaxed about pooling information and seeking help from their friends. A computer can analyse the specific mistakes the student has made and can react in a different way from the usual teacher-this leads the student not only to self correction, but also to understanding the principles behind the correct solution. A computer gives individual attention to the learner and replies immediately to questions or commands. It acts as a tutor and guides the learner towards the correct answer while adapting the material to his/her performance. This flexibility is impossible to achieve with written handouts and worksheets.

There are three models for computer use in language learning:

1. as a language teacher;
2. as a stimulus for conversation;
3. as an aid to cognitive development.

In order to think about uses of the computer in the classroom, it is useful to keep two terms in mind. Computer Assisted Instruction (CAI) is the term used to describe computer programs

designed for teaching, whereas Computer Assisted Language Learning (CALL) is the term used for different forms of second language instruction accomplished with the use of computers.

In using a CAI program, students follow the instruction as the lesson unfolds on the terminal while interacting with the computer. Generally limited to developing reading and writing skills, lessons may include drills and practice exercises, reading comprehension passages, games or simulations, etc. Over time the hardware has improved, which results in better graphic facilities, including colours, the possibility of animation, touch screen, audio output and video media. Listening comprehension exercises have been developed using a sound blaster and/or a CD-ROM. A short dialogue is displayed on the screen (students can hear it), and then a related question is viewed on the screen. Once the students type in an answer, the fast and accurate accessing system enables branching feedback to be provided in audio form. Students can also request backup information in written or audio form and can make use of an audiocard allowing instant access to digitally recorded sound files stored on the hard disk.

Rather than replacing teachers, computer-based packages are being used as classroom resources. The way in which these packages are used varies with the context of their use, age levels, subject areas or classroom settings. Using a computer in teaching languages can offer unlimited types of activities with considerable potential for learning.

Teachers from different subject areas are likely to have different perceptions of the use of computers in learning, as the knowledge, aims, and skills associated with different subjects vary quite widely. Teachers who subscribe to a view of education as an acquisition of knowledge in the form of information will find that many computer packages can be used. Teachers who value learning by discovery or by interaction with other students will find that there are various computer-based packages to support those approaches.

The following describes some of the advantages and limitations of using a computer in CAI or CALL.

Advantages

Both CAI and CALL systems allow the normal and even unusual errors that people are apt to make.

By creating friendly programs with both systems, any user can work independently at the console.

The programs respect the individuality of the students by allowing them to make frequent choices with many options.

The feedback to the users helps the students to analyse patterns in the language.

CALL programs present the learner with a novelty. They teach the language in different and more interesting, attractive ways and present language through games and problem- solving techniques. As a result, even tedious drills can become more interesting.

Computers offer a valuable source of self-access study adaptable to the learner's level.

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Besides teaching a foreign language, CALL programs will provide the learner with some sort of computer literacy, which is becoming essential in modern society and could be of great help in future training and career prospects.

Students are more relaxed; they are no longer afraid of being corrected, judged, or watched. In fact, they create their own environment around the computer, a sort of privacy where intruders are not welcome; only some colleagues have access as needed.

The computer has no "days off."

The computer is patient and will tirelessly go over and over again the same point for as long as necessary.

The computer is "the best" teacher in the world as it can provide information requested in a very short time.

Limitations

Learners who do not have prior experience in using a keyboard might waste quite a bit of valuable time identifying letters on the keyboard. However, with practice this can be worked out if one is not afraid of learning new things.

Working with computers normally means that the learners work in isolation. This obviously does not help in developing normal communication between learners, which is a crucial aim in any language lesson. In practice, learners tend to revert to their mother tongue in discussions. The teacher should not allow this if s/he wants to improve the students' language skills.

CALL and CAI programs deal mainly with reading and writing skills, and even though some listening programs have been developed recently, they are very limited (there are very few interactive games with outstanding graphics, colours, and spoken language capabilities).

The programs which develop communicative interaction normally present pre- determined uses of language based on the writer's imagination of what would take place rather than what people really say in real situations (so called "false conversations"). This sometimes creates confusion and frustration on the part of the learner. However, these problems tend to lessen as students become more familiar and comfortable with these programs.

The time and effort required to develop such programs can be considerable.

Computers cannot cope with the unexpected.

It is more tiring to read from a screen than from a printed text.

For teachers who develop their own material, the time spent on programming and typing in the lessons can be quite lengthy.

Using the Computer

With the arrival of inexpensive computers, second language teaching is now gaining a new dimension. Second language teachers will have to learn how to work with and adapt to the new technology to maximize learning opportunities for their students. Our inclination is to adapt the technology to our ideas rather than adjust our thinking to confront the new reality on its own terms.

The kind of exercise most appropriate for a computer is one in which there is only a small set of acceptable answers to each question and in which it is fairly easy to predict where the learner may go wrong. An example would be a drill aimed at a specific point of grammar and vocabulary.

The kind of exercise least capable of being computerised is one in which the student has a relatively free hand, as in essays or creative writing, or one in which the number of possibilities is too large for computerization to be a practical proposition, as in the case, for example, of translations of long passages. The computer is only an instructional medium. It is not tied to any teaching method. Being helpful in building or consolidating the basis necessary for achieving a reasonable level of communicative competence, computers have the advantage of allowing teachers to split the class, thus enabling the teacher to create the kind of environment which simulation and other activities require.

Students enjoy programs which have many possible variations and combinations. The teaching points may be primarily morphological, syntactic, lexical, or stylistic; they may call upon integrative skills, or they may relate to background knowledge. The exercises may involve any of a large number of operations- substitution or transformation drills, gap-filling exercises, copying, writing down a dictation, putting words in the correct order, or answering certain types of comprehension questions.

Some software packages include printed, audio, video, or other materials to be used in conjunction with the software for reading, writing, and many other types of classroom activities and provide a focus for small group discussion, cooperation, planning, record keeping, and problem solving at the computer. Techniques designed to enhance the illusion of a tutor can be psychologically helpful in the initial stages of computer assisted instruction as a means of

overcoming the barrier between person and machine. These are likely to succeed best with younger pupils. If the computer's comments are given in the language taught, the exchange will also have some demonstrative value as a simulation of conversation. Clearly, it will be up to each teacher to determine, by trial and error, the optimal degree of personification for materials and students in question.

Some computer games can be helpful in enhancing reading, for example, in the English classroom. They can make reading interesting by providing an objective that has immediate results such as succeeding at a game. Instead of concentrating on the fact that they are reading English, students simply play a game.

Another advantage of these games is that they are "user friendly." A person does not need to know a lot about computers to be able to compete in these games. The dialogues usually include realistic language and contain a dose of humour as well.

If the teacher wants to help the students and have them read a bit more, s/he can prepare a short guide on what steps to follow to play in the game, and/or prepare a short introduction to the plot, or preteach some new vocabulary, and so on. Students play these games better in pairs, so they can discuss what to do next, help each other find clues, or, if necessary, look up words in an English dictionary. It does not matter how far into the game they get. The fact that they read and use English as naturally as possible and in a funny and interesting way is definitely a great asset. Of the various techniques available, the use of help files enabling the learner to retrieve information as necessary immediately springs to mind. Help files provide the teacher not only with an unobtrusive solution to the problem, but also with a means of accommodating different learning styles.

For example, by storing grammar rules and examples of actual usage in a help file, teachers can cater at the same time to the learner who likes to be given rules at the outset, and to one who prefers to have a chance of deducing them. Lexical information and hints pointing the learner in the right direction or even providing the correct answer can be put into help files to change the computer from an instrument that simply teaches to a resource one learns from.

Another way of shifting responsibility from the teacher to the learner is to allow the learner to exit from an exercise before the end. One of the greatest advantages of a "quit" facility is, indeed, that it allows the learner to try out exercises without being committed to what may be too easy or too difficult a task. Generally speaking, a "quit" facility gives the learner freedom of action, including the possibility of ignoring the existence of the facility altogether, and working through the lesson in a traditional manner from the beginning to the end.

Another innovation involving self assessment consists of giving the learner the option of working mentally. The learner decides on the answer before requesting the correct answer for mental comparison. The mental comparison option legalizes the practice of pressing the return button without typing an answer in order to get at the correct answer. If a student answered in his/her mind, s/he can get immediate feedback with most programs by pressing the return button for the correct answer without actually typing it in. Although it has certain dangers and will be

appropriate only in certain circumstances, it solves the typing problem and is very useful to students who are revising.

The learner may be able to adjust the level of difficulty of the activity. In a gap-filling exercise, for instance, the learner can choose the frequency or the size of the gap. Or if the speed is important, s/he can be allowed to select the pace at which the items are to be displayed. In all this, it is most important to remain flexible. The aim is to remove as far as possible any element of force and create fluid, multi- purpose, multi-level packages to be used by the learner as he/she deems fit.

Computer assisted learning should be enjoyable so that the "ally" should from time to time turn into a playmate. A great deal can be achieved by exploiting the intrinsic appeal of riddles and puzzles. A potentially dull and boring exercise can often become very attractive simply by being turned into a guessing game. Many standard language games such as crossword puzzles, anagrams, word ladders, and charades lend themselves readily to computerization.

One can take advantage of real time by setting time limits and organizing speed reading activities. Animated graphics, which so far remain unexploited, promise to gain importance in the future. Graphics in general are likely to become more widespread as CALL spreads to encompass younger age groups, and the expertise of authors increases. Even simple graphics can be very effective. Maps and diagrams can convey size, shape, position; family trees provide visual cues for exercises. With the addition of animation you can have events and processes.

Simulations can also encourage students to conduct role-plays with a view to gaining insight into an historical situation or to establish empathy with the central character. One of the great advantages of computer simulations is that they can often be used by groups of students as well as by individuals. Computer simulations can thus be of great assistance in simulating conversation, in confronting students with tasks to be carried out in the here and now.

In a typical application, the administrator uses the computer to test, to grade the test, to record the marks, to work out profiles, and uses the results to guide students through the material. The computer may keep an index of learning resources, help with registration, or do the time keeping. In the course of performing these duties, the computer stores, retrieves, and manipulates large amounts of data requiring the kind of memory which at present only a mainframe can provide.

The range of topics with which the computer can help is vast, from the evaluation of methods and materials through measuring the realism of teachers' expectations or the reliability of self assessment to conducting experiments on pacing, sequencing, interference, etc.

How quickly computer-based research will take off and how successful the computer will be is a matter for speculation, but it is bound to change to some extent, what happens in our classrooms. In spite of the many applications and advantages, CALL and CAI still have not found their rightful place in language learning and teaching. We should avoid asking ourselves how we can teach our lessons on the computer and begin to re-evaluate our methods in the light of the computer's tremendous teaching potential. Teachers must address themselves to the challenge of

computers and effectively apply their theoretical knowledge and practical experience to the teaching of second-language communication through this new medium.

The field is wide open.

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